AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

What is claimed:

1. (currently amended) An apparatus for cardiac defibrillation which comprises an external circuit and an implantable circuit; the external circuit including an induction transmitting coil and signal generating means for applying radio frequency pulses of predetermined shape to the transmitting coil; the radio frequency pulses having energy levels such as to cause defibrillation; the implantable circuit including an induction receiving coil for receiving the defibrillation radio frequency pulses when the two coils are in proximity, and a rectification circuit having an input connected to the receiving coil and an output driving electrodes implantable in the heart, to transfer defibrillation signals to the heart.

2. (previously presented) An apparatus according to Claim 1, for use in atrial defibrillation, in which the power transmitted per pulse is less than about 5J and the radio frequency is in the range 3-30 MHz.

3. (original) An apparatus according to Claim 1 or Claim 2, in which the signal generating means comprises a radio frequency generator switched or gated under the control of a pulse generation and shaping means which in turn is responsive to an ecg synchronisation signal.

4. (original) An apparatus according to Claim 3, in which the ecg synchronisation signal is provided via a telemetry transmitter implanted in the patient.

5. (previously presented) An apparatus according to Claim 1, in which the external circuit further includes a telephony link by which the ecg may be transmitted to, and/or the apparatus controlled from, a remote location.

6. (previously presented) An apparatus according Claim 1, in which the external and implantable circuits include impedance matching components to achieve a high degree of tuning.

7. (original) An apparatus according to Claim 6, in which the inductive coupling is tuned to resonance.

8. (currently amended) An apparatus according to Claim 7 in which the inductive coupling is tuned to resonance by use of series resonance ~~n~~ in the external circuit and parallel resonance in the implantable circuit.

9. (previously presented) An apparatus according to Claim 1, in which the implantable circuit contains only passive components.

10. (currently amended) A method of cardiac defibrillation which comprises transmitting pulses of controlled shape and energy transdermally by high frequency magnetic induction from an external circuit, which pulses have energy levels such as to cause defibrillation, to a substantially passive implanted circuit which receives the defibrillation pulses and includes electrodes ~~implanted~~ implantable in the heart, to transfer the defibrillation pulses to the heart.

11. (original) The method of Claim 10, in which the electrodes are implanted to provide atrial defibrillation.

12. (previously presented) The apparatus according to Claim 2 wherein said radio frequency is about 7 MHZ.